

AIDS TO NAVIGATION

LATERAL SYSTEM (FEDERAL)

The waters of the United States are marked for safe navigation by the lateral system of buoyage. The system employs a simple arrangement of colors, shapes, numbers, and light characteristics to show the side on which a buoy should be passed when proceeding in a given direction. The characteristics are determined by the position of the buoy with respect to the navigable channels as the channels are entered from seaward.

The expression "red right returning" has long been used by the seafarer as a reminder that the red buoys are kept to the starboard (right) side when proceeding from the open sea into port (upstream). Likewise, green buoys are kept to the port (left) side, (see page 8). Conversely, when proceeding toward the sea or leaving port, red buoys are kept to port side and green buoys to the starboard side. Red buoys are always even numbered. Green buoys are odd numbered. Red and white vertically striped buoys mark the center of the channel.

UNIFORM STATE WATERWAY MARKING SYSTEM

Most waterways used by boaters are located entirely within the boundaries of the state. The California Uniform State Waterway Marking System has been devised for these waters. Examples of such aids are found on page 6.

The waterway marking system employs buoys and signs with distinctive standard shapes to show regulatory or advisory information. These markers are white with black letters and have orange borders. They signify speed zones, restricted areas, danger areas, and general information.

Aids to navigation on state waters use red and green buoys to mark channel limits. Red and green buoys are generally used in pairs. The boat should pass between the red buoy and its companion green buoy.

MOORING TO BUOYS

Tying up to or hanging on to any navigation buoy (except a mooring buoy) or beacon is prohibited.

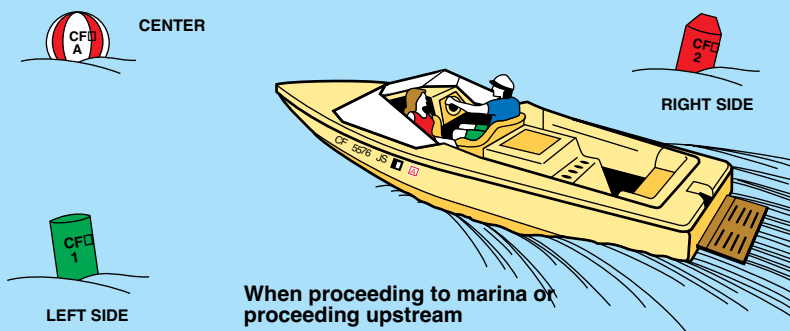
AIDS TO NAVIGATION

In recent years, modifications to certain aids to navigation located on coastal and inland waters have been completed. These changes apply to aids used in both the lateral and state waterway marking systems. (See charts which follow.)

- Port-hand buoys are painted green, with green fixed or flashing lights.
- Starboard-hand buoys are painted red, with red fixed or flashing lights.
- Safe water buoys, also called midchannel or fairway buoys, and approach buoys are painted with red and white vertical stripes, with flashing lights.
- Preferred channel, or junction buoys, are painted with red and green horizontal bands, with flashing lights.
- Special marks (traffic separation, anchorage areas, dredging, fishnet areas, etc.) are painted yellow. If lighted, the light may be fixed or flashing.

CALIFORNIA WATERWAY MARKER SYSTEM

INFORMATION AND REGULATORY MARKS



BOATS KEEP OUT
 Explanations may be placed outside the crossed diamond shape such as: dam; rapids; swim area.



DANGER
 The nature of danger may be indicated by words inside the diamond shape such as: shoal; reef; wreck; dam.



CONTROLLED AREA
 Type of control is indicated within the circle such as: 5 MPH; No Anchoring



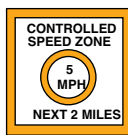
INFORMATION
 For displaying official information such as: directions; distances; locations.



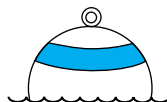
MARKER ON PILING



MARKER ON SPECIAL PURPOSE BUOY



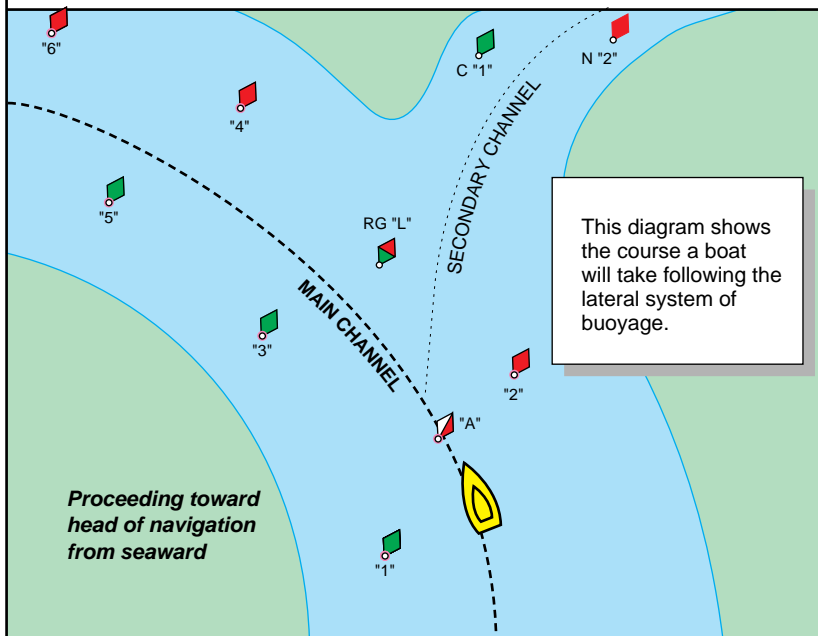
DUAL PURPOSE MARKER ON LAND



MOORING BUOY

FEDERAL CHANNEL MARKING SYSTEM

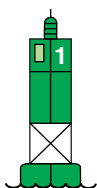
LATERAL SYSTEM AS SEEN ENTERING FROM SEAWARD



MAIN CHANNEL BUOYS

PORT SIDE:
Odd number aids, green light only

FIXED	
FLASHING (2)	
FLASHING	
OCCULTING	
QUICK FLASH	
ISO	

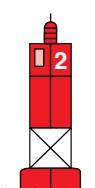


"1" "3" "5" "7"

LIGHTED BUOY:
Odd number, increasing toward head of navigation, leave to port (left) when proceeding upstream.

STARBOARD SIDE:
Even number aids, red light only

FIXED	
FLASHING (2)	
FLASHING	
OCCULTING	
QUICK FLASH	
ISO	



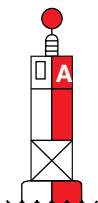
"2" "4" "6" "8"

LIGHTED BUOY:
Even number, increasing toward head of navigation, leave to starboard (right) when proceeding upstream.

MAIN CHANNEL BUOYS, CONTINUED

SAFE WATER BUOY - MARKS MIDCHANNEL: No numbers - may be lettered, white light only

MORSE CODE (A)



LIGHTED AND/OR SOUND:
Marks midchannel, pass on either side. Not numbered, may be lettered. Letter has no lateral significance, used for identification and location purposes.

UNLIGHTED



SPHERICAL



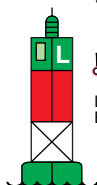
MR

PREFERRED CHANNEL BUOY: No numbers, may be lettered

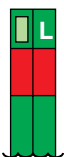
Topmost band denotes preferred channel. Letter has no lateral significance, used for identification and location purposes.

COMPOSITE GROUP FLASHING (2 + 1)

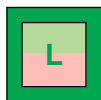
STARBOARD



LIGHTED
BUOY "L"

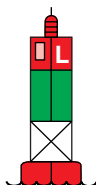


UNLIGHTED
CAN "L"

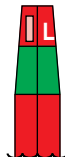


DAYMARK

PORT



LIGHTED
BUOY "L"



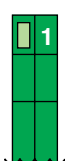
UNLIGHTED
NUN "L"



DAYMARK

SECONDARY CHANNEL BUOYS STARTS NEW NUMBERING SYSTEM

PORT

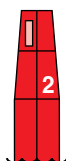


C "1"
UNLIGHTED
CAN BUOY:
Odd number,
leave to port.



DAYMARK

STARBOARD



N "2"
UNLIGHTED
NUN BUOY:
Even number,
leave to
starboard.



DAYMARK